1   WHAT IS CLAIMED IS

5   1. A method of controlling a network which
includes network elements connected via links, and
provides services, comprising the steps of:
            creating view-configuration information based
10   on network-configuration information with respect to
each of the services such that the view-configuration
information is related to the network-configuration
information; and
            displaying a view based on the view-
15   configuration information with respect to each of the
services, the view including both or either one of a
physical network configuration of the network and a
logical network configuration of the network.

20

            2. The method as claimed in claim 1, wherein
said step of creating includes the steps of:
25   selecting network elements and links from a
network configuration represented by the network-
configuration information; and
            creating the view-configuration information
according to the selected network elements and links.
30

            3. The method as claimed in claim 1, wherein
35   said step of creating includes the steps of:
            selecting a connection from a network
configuration represented by the network-configuration

1 information; and

creating the view-configuration information according to the selected connection.

5

4. The method as claimed in claim 1, wherein said step of creating includes the steps of:

10 selecting ports of network elements from a network configuration represented by the network-configuration information; and

creating the view-configuration information according to the selected ports.

15

5. The method as claimed in claim 1, wherein

20 said step of creating includes the steps of:

specifying attribute conditions of connections; and

creating the view-configuration information by extracting network elements and links relating to at

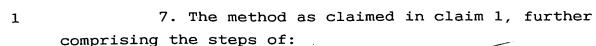25 least one connection that matches the specified attribute conditions.

30

6. The method as claimed in claim 1, wherein said step of creating includes the steps of:

specifying a service name; and

creating the view-configuration information

35 by extracting network elements and links relating to connections that provide the specified service name.

1   7. The method as claimed in claim 1, further
comprising the steps of:
          providing matches between failure levels and
failure labels with respect to different types of
5   failures, the failure levels indicating significance of
failures either as physical failures or as service
failures; and
          displaying a failure level of a failure
occurring in the network in association with the
10   displayed view.

15   8. The method as claimed in claim 7, further
comprising the steps of:
          controlling the failures by a unit of a node
or a port of a node; and
          selecting a failure level of a connection by
20   finding a largest failure level along the connection,
and displaying the failure level of the connection in
association with the displayed view.

25

          9. The method as claimed in claim 1, further
comprising a step of selecting nodes and links on the
displayed physical network configuration to set a route
30   between edges.

35   10. The method as claimed in claim 1, wherein
said step of selecting includes the steps of:
          selecting the edges on the displayed physical

1   network configuration; and

          setting the route between the edges by extracting nodes and links so as to use as small a number of intervening edges and links between the

5   selected edges.

10   11. A system for controlling a network including network elements and links, comprising:

          a database which stores network-configuration information and view-configuration information such that the view-configuration information is related to

15   the network-configuration information;

          a service-management server which attends to registering and updating of the information stored in the database, and defines views of a physical network configuration and a logical network configuration with

20   respect to each of the services based on the view-configuration information stored in said database;

          a network-management server which collects information on configurations of the network elements and the links as well as information on failures, and

25   informs said service-management server of a change in at least one of the configurations and the failures for a purpose of said updating; and

          a client which displays both or either one of the physical network configuration and the logical

30   network configuration with respect to said client's own service based on the views defined by said service-management server.

35

          12. The system as claimed in claim 11,

1   wherein said network-management server includes a
failure-level-conversion table that provides matches
between failure levels and failure labels with respect
to different types of failures, the failure levels
5   indicating significance of failures either as physical
failures or as service failures.

10

        13. The system as claimed in claim 11,
wherein said service-management server includes a
connection-setting unit which controls settings of a
connection between edges based on the edges, nodes, and
15   links selected from the physical network configuration.

20

25

30

35